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**STRUCTURAL ADJUSTMENT POLICIES,
INCOME DISTRIBUTION AND
POVERTY: A REVIEW OF THE
JAMAICAN EXPERIENCE**

by

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Structural Adjustment Policies, Income Distribution and Poverty: A Review of the Jamaican Experience

Sudhanshu Handa and Damien King**

Although Jamaica has had Structural Adjustment and Standby Loans from the World Bank and IMF since 1977, the implementation of typical structural adjustment policies such as trade and financial liberalization, privatization and labor market reform has for the most part occurred only since 1989. During the period 1989-1993 when the Jamaican economy underwent the most drastic liberalization policies, inequality and poverty declined, although there were sharp jumps in both inequality and poverty in 1991 when financial liberalization occurred. The overall decline in poverty is attributed to the strong performance of domestic agriculture which seems unlikely to be sustained.

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Introduction

Like most countries in the Latin American and Caribbean region, Jamaica has undertaken drastic economic policy reforms since the 1980's. The new policies have entailed a general shift away from quantitative restrictions and price controls, and towards liberalization, privatization, and a reduction in direct government involvement in the production of goods and services. These reforms, typically associated with the Structural Adjustment (SA) policy package advocated by the World Bank and the conditionalities imposed by the IMF, have elsewhere been accompanied by an increase in inequality and poverty in many Latin American countries (Berry, 1995). This paper investigates the trends in inequality and living standards in Jamaica for the period 1989-1993, and places these trends within the broader economic policy framework of the 1980's and early 1990's. An important issue is the extent to which the observed trends in inequality can be linked directly to the SA policies implemented by the two governments in power during this period, hence considerable space is devoted to documenting the precise policy changes (and their timing) in four areas which form the core of the typical World Bank SA policy package: labor market reform, trade liberalization, financial liberalization, and privatization.

The next section of the paper outlines the policy reforms implemented by Jamaica under the aegis of the various SA programs. Section II then provides evidence on income distribution, poverty and living standards for the period 1989-1993 (the years for which household surveys are available), and as will be shown below, this period is actually when the most severe SA policies were implemented. Section III concludes the paper with an assessment of SA policies and poverty and inequality in Jamaica.

I. Structural Adjustment Policies

Jamaica has been the subject of structural adjustment programs with the IMF and the World Bank since 1977, when Jamaica signed its first two-year Standby Agreement with the International Monetary Fund. Since then, more than ten IMF agreements and three World Bank SA programs have been concluded between those institutions and Jamaica. Over the course of these eighteen years, there has been a series of policy implementations consistent with the traditional methods and goals of stabilization/structural adjustment programs. Starting with devaluation in 1977 and the removal of some price controls in 1988, the period has seen deregulation of import controls, public sector retrenchment, reduction and removal of subsidies,

tighter monetary and fiscal policy, deregulation of the financial sector, and privatization of publicly-owned enterprises.

Notwithstanding the presence of structural adjustment *programs* since 1977, the *implementation* of structural adjustment policies has largely occurred since 1989. The earlier years consisted primarily of nominal devaluations (quickly eroded by inflation), limits on public sector borrowing, public sector contraction, which was considerable, and sporadic attempts at price deregulation. Furthermore, the implementation was not a linear progression towards a liberal, market-oriented economy. The earlier programs prescribed market liberalization, but included wage guidelines. Privatization was supposed to have begun in 1981, but there was a major acquisition in 1982.

Up until 1989, the policies were centered around fiscal and monetary management, rather than the literal structural adjustment of the economy. As such, there was very little accomplished in terms of the liberalization of the economy. More recently, the government has embarked upon trade liberalization, financial sector deregulation, privatization, and labor market reform, most of which has occurred only in the last six years.

a) The Labour Market

Structural and Institutional features

Although the size of the labour force has increased by 15% over this time period, the labour force as a proportion of the population has remained constant and even declined slightly (Table 1). However the economy has absorbed more workers—the unemployment rate declined steadily throughout the 1980's and has been constant at approximately 15% during the 1990's. Secondly, the proportion of part-time workers has declined during this period, from 19% of the employed in 1981 to 9% in 1994. This is primarily due to the increased attachment of female workers. Female part-time employment went from 36% in 1981 to 12% in 1994, while that for men declined from 14% to 7% over the same period.

Employment in Jamaica is subject to a tax liability of some 35 percent, consisting of an income tax of 25 percent and various payroll taxes of about 10 percent, the latter category including special education and health taxes and a social security scheme.¹ These percentages are often much higher in unionised industries where unions have successfully bargained for additional compulsory benefits. As a result, there is an incentive for firms to employ labour on a fixed term or part-time basis.

¹ The latter category includes special housing and education taxes, and a social security scheme. In addition employees must be given at least 2 weeks each of vacation and sick leave per year, women are entitled to maternity benefits of 8 weeks with full pay and 4 weeks without pay, and the advanced notice requirement is 2 weeks (4 weeks for workers with over 5 years of tenure).

The importance and coverage of unions has shrunk considerably over the last 15 years. Union coverage was highest in the mid 1970's when 40% of employees were estimated to be working under a collective bargaining agreement (Stephens & Stephens, 1986). Union power was severely curtailed by the Seaga administration during the 1980's, and currently, union officials estimate that less than 20% of all employed workers are currently under a collective bargaining agreement. During 1980's, the number of man-days lost to strikes declined by 75 percent (although it has increased again in the early 1990's). The current low level of union coverage can be attributed to the retrenchment of the public sector, which was heavily unionised, during the 80's, the growth in informal labour market activity,² and the active attempts by firms, especially in manufacturing and tourism,³ to avoid unionisation.

Finally, while Jamaica has appeared at times to have an active wage policy, the effect on the labour market has been negligible. The minimum wage lead to wage increases for nearly a quarter of the work force when first implemented in 1975, but has never been as high in real terms as it was when first implemented (King, 1994), and is unlikely to have had any employment effects in the last decade. For example, the annualised weekly minimum wage in 1993 was barely 50% of the minimum food basket costed by the Ministry of Health to construct the poverty line. The government has also announced public sector wage ceilings and economy-wide wage guidelines from time to time, but these have had little impact.

Reform

Policy change in the direction of reforming the labour market has thus far consisted primarily of changes in the income tax structure. The tax rate was changed in 1986 from a system with four brackets ranging from 60 to 30 percent with a large number of exemptions and non-tax allowances, to a flat tax of 33.3 percent with one basic exemption. The flat tax rate was subsequently reduced to 25%. Elimination of the high dispersion in tax rates lead to greater tax compliance, and the rate reduction resulted in no loss of revenue (World Bank, 1994) as economic activity formalised, increasing the tax base.

² Witter & Kirton (1990) estimate that employment in the informal sector increased steadily from 144,514 in 1980 to 343,921 in 1989, or from 17 to 28 percent of the labour force.

³ In 1995 the Grand Lido, an all inclusive tourist resort, fired all its lower level staff when union officials tried to organize a collective bargaining vote.

b) Trade Liberalization

Traditional Patterns

Reflecting the small size of the economy, Jamaica's production has a high import content and its merchandise exports are concentrated among a few primary products. In the late 1970s, prior to trade liberalization, industrial supplies and food were the largest non-fuel components of imports (Table 2). By the early 1990s the share of consumer goods in the import basket nearly doubled, while the share of food and beverages and industrial supplies declined by approximately 4 percentage points. The share of the import bill devoted to fuel also declined dramatically due to the fall in the price of oil.

At the start of the 1980's, bauxite, alumina, sugar and bananas together accounted for 83 percent of the value of the country's exports. By the early 1990's, Jamaica was still heavily dependent on these four commodities for its export earnings although their share had declined to 60 percent. Non-traditional export growth occurred mainly in the cut/make/trim (CMT) apparel industry, with some growth also in fresh fruits, vegetables and cut flowers.

Trade Reforms

Jamaica's Structural Adjustment related liberalization experience can be divided into 3 phases. The first round of trade liberalization policies occurred between 1983-1985 and coincided with the World Bank SA Loan in 1983. The main policy change was the dismantling of quantitative restrictions (import licenses) which were used to foster ISI. Nearly 180 items were removed from the restricted list during this period, but there was a corresponding increase in stamp duties (separate from the regular tariff rates) to cushion the shock to the import substituting sectors.

The second set of liberalization reforms occurred between 1987-1991, consisted of tariff reductions and the dismantling of the remaining quotas and quantitative restrictions, and culminated in the elimination of the public import monopoly of the Jamaica Commodity Trading Corporation (JCTC) in 1991. The JCTC had controlled the importation of certain commodities, which it restricted and sold at artificially high prices in order to subsidize food imports.

The third stage of liberalization started at the end of 1990 with the removal and reduction of stamp duties as well as tariff rates. According to the World Bank (1994), the average tariff rate in the economy fell from 50 percent to 20 percent between 1989 and 1991. Stamp duties were also to be abolished on all imports as part of a World Bank agreement, but they continue to be in effect for most agricultural and agro-industrial products because of the farm lobby, although the upper range has been lowered to 50 percent. The Common External Tariff (CET) for CARICOM

countries was also agreed upon in 1990, with tariffs ranging from 0-45 percent until the end of 1993, and then declining steadily after that. According to the CET agreement, by 1997 the tariff rate on non-competing inputs must be reduced to 5 percent, while those for competing inputs can be no more than 15 percent.⁴ Table 3 shows the tariff range for the top seven imports at the 2-digit SITC level for selected years. The table, showing tariff changes, understates the extent of trade liberalization since the original trade barriers were quantitative restrictions.

The value of imports overtakes exports during the second round of tariff reductions and elimination of quotas in 1987 (Figure 1). The negative shock to imports in 1991 was a consequence of financial liberalization in 1991, which led to a depreciation of the currency. The composition of the country's exports also changed during the period of liberalization. At the end of the 1970s traditional exports made up 90 percent of total exports; by 1994 traditional exports had fallen to 67 percent of the total (Figure 2). The structure of employment reflects the change in output, as the share of employed workers increased in manufacturing and decreased in agriculture (Table 1).

c) Privatization

Traditional Features

The task of privatization in Jamaica, if it was to be significant in terms of structural adjustment, would be immense. In 1981, the Ministry of Finance estimated that there were some 400 entities under (whole or partial) public ownership (United Nations, 1993). There was substantial government involvement in finance and tourism (where it owned half of all hotel rooms) and lesser involvement in the mineral, petroleum, construction, and agricultural industries.

This was as much a result of political philosophy as of economic expediency. The administration of the 1970s had sought to control "the commanding heights" of the economy, consistent with the principles of the social democracy that it espoused. At the same time, the economic stagnation which accompanied its tenure necessitated the acquisition of some enterprises in order to maintain their operation.

The Privatization Process

Privatizations were pursued several ways, through various government agencies. The divestment of the hotels were administered by National Hotels and Properties, which had been formed to oversee their ownership in the first place, real estate properties were sold under the auspices of the Urban Development Corporation, which is responsible for publicly-owned real

⁴ Imports are designated as competing if member countries can produce enough to satisfy 75 percent of regional demand.

estate, and other holdings were divested by National Development Bank of Jamaica. The methodologies of divestment were equally diverse, including public offer of shares, private sale of assets, and competitive bidding.

The *ad hoc* nature of the methods of privatization was matched by a sporadic pace. Privatizations began as early as 1981. Between 1981 and 1985, there was a net divestment of two entities, as a result of three privatizations and one new acquisition. *Versair Inflight* and *Southern Processors* were sold in 1981, and a sugar estate three years later, but in 1982 the government acquired an oil refinery from *Exxon*. A new privatization program was launched in 1986. In that year, the government divested five entities, and sold some of its shares in National Commercial Bank, the largest retail bank. But the pace of privatization was relatively slow - an average of just over three per year during 1986-88 (Figure 3).

The lackluster pace of privatization during the 1980s, both before and immediately after the start of the privatization program, can be explained by domestic politics. The Jamaica Labor Party administration of the 1980s saw political gain in positioning itself as the ideological opposite of the social democratic regime that had fallen out of favor in the 1970s. Its position on public ownership of economic entities was thus motivated. On such a platform, it was elected in 1980. However, its fundamental political philosophy has always been consistent with state participation in the economy. Therefore, the assumption of government by their administration was not accompanied by a rush to divest the state of economic intervention.

It is therefore only with the arrival of the People's National Party administration in 1989 that privatization was pursued with any zeal. Between 1989 and 1994, the pace of privatization accelerated considerable, averaging eight per year.

Public ownership of economic enterprises remains significant. Despite the flurry of divestment over the last five years, only 15 percent of the number of entities owned in 1980 have been divested. In terms of value of equity, however, the privatization has been more significant than that number indicates. Almost of all of the large government holdings have been spun off. The pattern of divestment therefore supports the contention that structural adjustment in Jamaica has been a recent phenomenon, notwithstanding the longer history of structural adjustment programs.

d) Financial Sector Reform

Traditional Features

Control of the financial sector in Jamaica has traditionally been exercised through direct restrictions on the quantity and price of credit, in preference to the traditional, more subtle

instruments such as open market operations and re-discount interest rates. The financial sector has been subjected to direct restrictions on the amount of credit, on the direction of credit (to, say, commercial loans rather than consumption), and on deposit and lending rates.

Up to 1989, the government was exercising its quantitative control of credit on average of once per year, on each occasion specifying a ceiling above which total commercial bank credit should not rise. Deposit rates of all financial sector institutions were capped by the central bank, more often than not at rates substantially below the rate of inflation, thus constraining the institutions to negative real rates of interest. Financial sector regulation went as far as the imposition of restrictions on the terms of installment credit offered by the retail trade.

In the foreign exchange market, exchange controls, first introduced during the second world war (Sampson 1994), had been in effect continuously since 1974. Jamaican entities were, for the most part, not allowed to hold either assets or liabilities denominated in a foreign currency. Between 1974 and the early 1990s, exchange controls were enforced under various exchange regimes and policies.

Jamaica had operated under a fixed exchange rate regime since the introduction of a currency board in 1939, through the creation of a central bank in 1961 (Lim 1991). The official exchange rate was set by the government, and after the 1974 imposition of exchange controls, not defended by the trading of the central bank. This gave rise to a pervasive and, as is their nature, inefficient black market.

The Reform Process

The process of liberalizing the financial sector began in September 1990 when commercial banks were authorized to buy and sell foreign exchange subject to the exchange control regulations that remained in place. This represented a divestment of teller work by the central bank, but not of discretionary authority since private citizens were still bound by exchange control restrictions. By the end of the year, commercial banks were allowed to set their own rates on savings deposits, and were authorized to hold deposits denominated in a foreign currency.

The pace of financial liberalization quickened in 1991 when preferential interest rates offered by the development banks started to be phased out, the central bank switched from quantitative credit restrictions to reserve requirements and open market operations as its primary instruments of monetary policy, Jamaican firms were allowed to borrow abroad, and the government removed exchange control restrictions on the private purchase and sale of foreign exchange. Though private citizens did not require a license to purchase foreign exchange, and

commercial banks were authorized to trade in foreign exchange, the rate was still determined by "guidelines" from the central bank.

The surge in the pace of reform in 1991 had severe consequences for the economy as the banking sector adjusted from repression to liberalization. The inflation rate rose dramatically in 1991 and early 1992, probably as a result of financial liberalization. As commercial banks reallocated their portfolios following the liberalization measures, M1 surged (Table 4). That this was due primarily to a liberalization-induced portfolio adjustment on the part of commercial banks, and not to growth of the monetary base, is evidenced by Table 4. Note that there is growth in M1 in 1991 not matched by increases in the monetary base.

Indicative exchange rates from the central bank were discontinued in 1993. However, the requirement that commercial banks sell a percentage of their purchases to the central bank at an average buying rate was a drag on the adjustment of the spot rate to changing market conditions. Between 1993 and 1995, the repurchase requirement was gradually reduced from 28 percent to 5 percent. Restrictions on minimum down-payments and maximum repayment periods for installment credit were removed in 1994.

While economic policy in Jamaica has taken place against a background of structural adjustment since 1977, the pace of reform has been significantly greater in recent years. With trade reform beginning in 1983, labor market taxes changed in 1986, privatization accelerating in 1989, and financial liberalization only since 1990, the mid 1990s represents an appropriate time to assess the state of income distribution and poverty in Jamaica.

II. Income Distribution and Poverty

The Jamaica Survey of Living Conditions (SLC), a nationally representative annual household survey is used to evaluate the trend in inequality, poverty and basic needs between 1989 and 1993 (the years for which data are available).⁵ The SLC surveys approximately 2000 households (the 1989 round is larger) and collects detailed information on household consumption expenditure which is used to make welfare comparisons between households. The expenditure measure used here includes the value of gifts and home production, and is adjusted for household demographic composition⁶. The SLC also contains modules on health, education and housing which can be used to assess the fulfilment of basic needs among the poor.

⁵ The SLC is one of the World Bank's Living Standards Measurement Surveys.

⁶ Weights used are: 0-5 years: 0.1, 6-11 years: 0.2, 12-17 years: 0.5, 18 years and above: 1.

a) *The Evolution of Inequality: 1989-93*

Table 5 presents the share of adjusted consumption for each decile from the five surveys. Shares are calculated on an individual basis by assigning household (adjusted) expenditure to each individual in the sample. Inequality decreased noticeably during this period: the share of consumption in the bottom decile increased from 2.4 to 2.8 percent while the share for the top decile decreased from 28.9 to 26.5 percent. The last two columns in Table 5 are positive for lower deciles and negative for richer deciles indicating that the consumption share increased for poorer groups and decreased for richer groups, while the Gini coefficient fell from .376 to .335 in the 5 year period. The decline in inequality was not monotonic; inequality actually increased in 1991 and 1992, with a significant decline in 1993. The periods of increasing inequality coincide with the accelerated policy reforms in the financial and trade sectors described above.

The Gini estimates presented in Table 5 are considerably lower than those typically reported for Jamaica [Ahiram (1964); Banskota et.al. (1988); UNDP (1990)], which range from 0.58 to 0.66. However those estimates are based on income rather than expenditure data, and although both underestimate the degree of inequality because they do not include capital assets which are highly skewed, the degree of under-estimation is greater in the case of expenditures.⁷ However our estimates represent the first time series evidence on income distribution from the same data source, and are thus more appropriate for evaluating the *trend* in inequality.

The biggest decline in inequality occurred between 1992 and 1993 and this is consistent with the private per capita consumption figures taken from the national accounts. Using constant 1989 J\$, private consumption remained virtually the same between 1989 and 1990, but then decreased steadily until 1993 when it increased sharply. Compensation to employees as a share of GDP, although much lower than the 1980-85 average of 51 percent, stayed constant around 43 percent from 1986-1993.

b) *The Evolution of Poverty*

Table 6 provides the mean level of expenditure in constant 1989 J\$ for each decile⁸. Consumption for all groups decreased between 1989 and 1992, and the decline was steepest in 1991 and 1992. The percentage decline in consumption from 1989 to 1991 was largest at the top of the distribution and smallest at the bottom (-9.7% for decile 10 compared to -0.5% for decile 1). Again,

⁷ The 1993 SLC contains a special module on employment and time use which reports income data. Using this module, the Gini calculation based on total household income from all sources (earned and unearned) is 0.491 which is much more skewed than that based on consumption but still below the range of the other studies. A detailed written discussion of the comparability of the two distributions is available from the authors.

⁸ CPI weights, taken from STATIN, are 1989:1, 1990: 1.24; 1991:1.84, 1992: 3.27; 1993:3.93.

1991-92 were the years with some of the most dramatic financial and trade liberalisation reforms in the economy. However what is remarkable is the extent of recovery after these shocks. Real consumption increased for all deciles between 1992 and 1993, with the largest percentage increases occurring among the lowest deciles; as we discuss below, this increase may be attributed to the strong rebound made by agriculture production where most of the poor are employed. These trends in real consumption are consistent with the trend in inequality observed in Table 5. All told, mean adjusted consumption was 5 percent higher in 1993 than in 1989 before the shocks of the early 1990's.

The mean expenditures reported in Table 6 may overstate the gains made by the lower deciles if the relative price of food increased over this period since food makes up a larger share of the total budget among poor households—in Jamaica this was actually case. The CPI for food in 1991 and 1993 respectively was 1.92 and 4.02 compared to 1.84 and 3.93 for all goods. One way to control for relative price movements in goods consumed predominantly by the poor is to compare the food ratio for households in each decile. This is reported in Table 7—if the living standards of poor households was improving, according to Engels Law, we should observe a decline in their food ratio over time.

The food share actually declines significantly at the bottom of the distribution (and increases at the top) between 1989 and 1991, indicating that the living standards of the lower deciles improved while that of the richest deciles deteriorated. However this trend is reversed in 1992 where there are large increases in the food ratio at the bottom and decreases at the top. Finally, in 1993 when the biggest decline in inequality is registered, the mean food share in the sample declines from 59.8 to 54.9 percent, and the food share in all deciles decreased. For the entire period, the food share declined by 6-9 percent in the bottom 4 quintiles, and increased by 1-2 percent in the top two quintiles, while for the entire sample, the mean food share declined by 3.7 percent, consistent with the 6 percent increase in mean adjusted expenditure reported in Table 6. Hence the food ratio data suggests that the living standards of the bottom quintiles has improved slightly between 1989 and 1993, while that of the top two quintiles has remained the same or fallen slightly.

As our final index of poverty, we construct two measures from the P-alpha family of poverty measures developed by Foster, Greer and Thorbecke (1984). The first is the 'headcount' measure (corresponding to alpha equal 0) which simply counts the number of people below a given poverty line. The second (corresponding to alpha equal to 1) is the 'poverty-gap' measure which takes into account

the average shortfall in income of the poor from the poverty line, expressed as a fraction of the poverty line.⁹

Following the approach in Grootaert (1994), we define two poverty lines: the first one is chosen to define 30 percent of the sample as poor in 1989 (J\$), and the second one defines 10 percent of the sample as poor in 1989. This is done because the poor may not be a homogenous group so their welfare may evolve differently over time. The 1989 poverty lines are inflated so that they remain constant in real terms, and the percentage of the people below these absolute lines are compared over time. The results of this procedure are presented in Table 8—because poverty is concentrated in rural areas in Jamaica, we also present estimates of these measures for urban and rural areas.

The trend in poverty measures parallel those observed for consumption and the food ratio. For the higher (30 percent) poverty line, both the headcount and poverty gap indexes show an improvement between 1989 and 1990, then a decline in 1991 and 1992, followed by an impressive reduction in poverty in 1993. Thus in 1993 only 20.6 percent of the population was below the 30 percent cut-off point for 1989. Moreover these trends are also maintained for the lower 10 percent poverty line as well.

Poverty is concentrated in the rural areas of Jamaica. For example, the first poverty line defines 30 percent of the entire population as poor in 1989, but 40.9 percent of the rural population fall below this line, while for the second (10 percent) line, 15 percent of the rural population are classified as extremely poor.

The evolution of poverty in the rural areas follows that of the entire country with one exception: using the 30 percent line, poverty declined slightly in the entire country between 1989 and 1990 but increased from 40.9 to 41.8 percent in rural areas. However, after that the two series behave the same way—increasing in 1991 and 1992 and decreasing significantly in 1993.

The trends in inequality and poverty outlined thus far are also consistent with the performance of real wages over the period. Wage data is available from *the Survey of Large Establishments* conducted quarterly by STATIN, and is presented in Figure 4 in constant 1988 Jamaican dollars. Two wage series are presented, one representing all employees (salary and hourly wage earners) and just hourly wage earners who represent the poorest segment of the employed labour force, and although the

⁹ The second measure captures improvements in welfare among the population below the poverty line. For example, say an individual below the poverty line is given an extra sum of money but still remains below the poverty line. The headcount measure would not register any change since the same number of people are still below the poverty line; the poverty gap measure however would decrease since it is based on the average shortfall of the poor relative to the poverty line.

latter series is lower than the former, their evolution is identical. Real wages fall consistently until 1992, and then rose sharply thereafter, coinciding with the decline in poverty and inequality documented above.

Anderson and Witter (1994: Tables 1.16-1.17) provide alternative estimates of living standards (based on the adequacy of reported earnings by employed household heads to feed a family of five) for the period before the one considered here. They find a sharp deterioration in living standards from 1977 to 1985, but a significant (although less than full) recovery from 1985 to 1989. The evidence in this paper indicates a fall in living standards between 1989 and 1992, coinciding with the drastic economic reforms in 1991 and 1992, but a more than full recovery in 1993, so that overall living standards during the period registered a small improvement.

c) Explaining the Improvement in Distribution

Implementation of SA programs are usually accompanied by, at least initially, a worsening of the distribution of income. The initial SA reforms in the early 1980s (mostly public sector retrenchment and some trade and price liberalisation) lead to a significant decline in living standards as documented by Anderson and Witter (1994). Although there is no direct data on income distribution for the earlier period, the ratio of compensation of employees to GDP in the national accounts fell from 51 percent before the first round of trade and price liberalisation policies to 43 percent by 1989. The next round of serious reforms occurred at the end of the decade and in 1991-1992, and this also resulted in a worsening of the distribution of income and living standards. What is remarkable however is the extent of the more than full recovery in 1993—what accounts for this phenomenon?

Real GDP growth jumped from 1.5 to 5.3% between 1988 and 1990, but remained stagnant thereafter (averaging about 1% for the first half of the 1990's), while the unemployment rate dropped 2.6 percentage points between 1989 and 1990 but also remained steady through the early 90's. A sectoral breakdown of GDP reveals that agricultural production, which employs 30% of the employed labour force (mostly in domestic production), grew by 45% between 1989 and 1994, and by 11 percent in 1993 alone. This increase, shown in Figure 5, is attributed to the removal of agricultural price and exchange controls which allowed exporters access to their foreign exchange earnings, and may explain the increase in consumption among the poorest deciles.

Figure 6 illustrates the movement in the urban and rural Gini coefficients and the rural-urban consumption ratio over this time period. The rural Gini decreases throughout the period, with an especially large drop in 1993, while the urban Gini actually moves in the opposite direction until 1993. Although over half the Jamaican population lives in rural areas where poverty is most severe, the full Gini follows the urban Gini closely from 1990 onwards. Also notable is the fact that inequality (given

by the level of the Gini index) is lower within each region than for the country as a whole, implying that inequality in Jamaica stems from differences between (rather than within) rural and urban areas. Finally, the rural-urban consumption ratio, an indicator of regional differences in welfare level, increases sharply in 1993 when the largest improvement in inequality occurred.

The other development driving the improvement in the distribution of income may be the success of the garment industry in the Free Trade or Export Processing Zones. The theoretical appeal for trade liberalisation is that LDC's have a comparative advantage in their most abundant factor: labour. These garment firms use primarily unskilled labour and are estimated to account for over 30 percent of employment in the manufacturing sector.¹⁰ As shown earlier, apparel is the most significant portion of non-traditional exports and has displayed phenomenal growth rates over the last five years.

d) The Social Dimension

Government expenditure on social and community services between 1988 and 1993 has fallen by 32% in real terms, and gone from 28% to 22% as a share of total government expenditure. User fees in the health sector, though still heavily subsidised, have slowly increased, and the government has recently introduced a 'cost-sharing' scheme for public primary and secondary schools. Have private households been able to mitigate the adverse effects of reduced government subsidies in health and education? Tables 9-12 provide evidence on selected schooling, health and housing outcomes for 1989, 1991, and 1993 taken from the SLC. We provide figures for the entire sample, as well as the bottom tercile and decile, again to see whether access to basic needs over this time period has differed for the poor and the very poor.

Schooling

Schooling outcomes are shown in Table 9 by age group. Primary enrolment is universal in Jamaica as can be seen from the first row in Table 9; total enrolment for all age groups did not drop over this time period. Table 9 also shows enrolment in secondary high schools. These schools are the most prestigious and academic of all the secondary schools and entrance requirements are extremely competitive. Enrolment in these schools did not suffer either, but attendance at these schools is highly correlated with family income—among the poor the enrolment rate is 9% compared to 21% in the full sample.

Jamaica's system of automatic promotion means that years of schooling is often an imperfect measure of student quality or skill as students have very little incentive to attend regularly. The bottom

¹⁰ In September 1995 the local newspapers in Jamaica reported that there were still 700 vacancies in the FTZs.

panel of Table 9 indicates that school attendance actually increased from 1989 to 1991 and held steady after that, although regular (full) attendance among children from poor households is significantly lower than the full sample and the gap does not decrease.

The lower right panel of Table 9 gives information on the proportion of students that attend a school where a meal is provided. This proportion increases steadily over the time period, and poorer children are more likely to attend a school which provides a meal. The school feeding and foodstamp programs are sponsored by US PL480 which may explain why these numbers appear to be counter-cyclical.

The steady performance of these 'quantity' outcomes in the face of government cutbacks and cost-sharing may have been achieved at the expense of educational 'quality', as argued by Anderson and Witter (1994)—school input indicators are consistent with this hypothesis. At the secondary level for example, enrolment over capacity was 6 percent in 1979/80, 56 percent in 1988/89, and had reached 109 percent by 1992/93. Meanwhile the percentage of trained teachers has fallen from 93 percent in 1979/80 to 86 percent in 1992/93. An indicator of the quality of education received by students is the percentage passes in the Caribbean Examination Council (CXC) exams¹¹: the pass rate in the General English Language Proficiency was 43 percent in 1986, 27 percent in 1989, and 25 percent in 1993.

In conclusion, the maintenance of gross educational outcomes is comforting, but the resulting decline in quality may have serious repercussions for the stock of human capital in Jamaica. Also, the gap in outcomes between rich and poor has not become wider despite the reduction in real resources to the education sector.

Health

Selected health outcomes are presented in Table 10. The incidence of illness has declined slightly over this period but this is hard to interpret since the poor often underreport illness; in fact this is the case in the Jamaican data set as well. More telling is the fact that the 'usual activity' days lost to illness increased despite the decline in reported illness. Finally, the proportion of the sick who sought care closely follows the trend in mean expenditures: falling between 1989 and 1991 (especially for the very poor) and then rising back to its 1989 level in 1993.

Table 11 gives health outcomes for pre-schoolers, taken from the anthropometric module of the SLC. The percentage of low birthweight (under 5.5 pounds) children and incidence of diarrhoea both increases significantly between 1989 and 1991—and the deterioration among the very poor was particularly great in 1991—but then drop back to their 1989 levels in 1993. Both these indicators are

¹¹ These are equivalent to the General Cambridge 'O' levels.

short term in nature and are thus expected to fluctuate according to current economic conditions. Notice that the health status of children from the bottom decile suffered dramatically in 1991.

The last panel of Table 11 shows the proportion of children immunised. In cases where full immunisation requires a course of three shots (such as Oral Polio Vaccine and DPT) the figure shown is the percentage of children who received the full set of vaccinations. The vaccination trends basically remain steady throughout the period, testimony to the excellent maternal and child health care delivery in Jamaica which was recently cited by WHO as being one of the best in the developing world.

Most of the measures analysed thus far are long term in nature and will not fluctuate from year to year in response to economic conditions. In addition, Jamaica's gross health indicators such as infant and child mortality and life expectancy are well above the average for other middle income countries due to the aggressive social sector policies pursued in the 1970's. Like education, however, the health sector in Jamaica has faced significant reductions in real resources during the 1980s, and there has been a clear decline in the quality of services provided. One result of the drastic cut in real wages offered by the government is low morale and a shortage of trained health professionals. During the 1980s the stock of registered nurses fell by 60 percent, so that in 1988 the ratio of registered nurses to population was 1:1671, well below the 1:769 ratio recommended by PAHO [Anderson & Witter (1994): Table 1.26].

Housing

Table 12 provides information on the quality of housing taken from 3 rounds of the SLC. The poor are more likely to own the house they live in but the quality of their housing is significantly worse. For example in the bottom decile, houses are less likely to have a flush toilet, indoor tap or electricity, and more likely to use a pit latrine and a public standpipe.

Although the proportion of families that own their homes has fallen over this period, the trends in water and sanitation facilities actually show a small improvement in access. The proportion of homes with flush toilets increased in both the full sample (44 to 47 percent) and especially in the poorest decile (4.8 to 21.6 percent), as has the share of houses with an indoor tap and electricity.

There are three main conclusions that can be drawn from this analysis of education, health, and housing outcomes. First, these outcomes have remained remarkably constant over this time period despite significant cutbacks in real resources allocated to these sectors—apparently households have been able to match this decrease with private resources. Second, these outcomes are long term in nature and thus mask the serious erosion in quality of service evoked by the decline in inputs such as trained teachers, classroom space and stock of registered nurses. Thirdly, health and educational outcomes

among the poor are lower than for the full sample, and this gap is not declining despite their recent increase in the share of total consumption. On the other hand, the analysis of water, sanitation and electricity trends shows small improvements in access to these services and significant improvements among the poor.

III. Summary and Discussion

The evidence presented in this paper indicates that between 1989 and 1993 inequality declined in Jamaica although the trend was not linear; inequality actually increased in 1991 and 1992, but then declined dramatically in 1993. The former coincided with the period in which drastic market oriented reforms in the trade and financial sector were implemented, while the latter may be attributed to the sharp increase in domestic agricultural production which is small scale and highly labor intensive.

The overall picture of the Jamaican economy in the last decade and a half indicates a link between market friendly SA type policies and income inequality. Initial reforms in the early 1980's --public sector retrenchment, gradual trade and price liberalization--coincided with an increase in inequality and a decline in living standards as documented by Anderson & Witter (1994), with an almost full recovery towards the end of that decade. The next round of reforms occurred in the early 1990's. These were much more drastic in their orientation towards the free market, and were also associated with a sudden and sharp increase in inequality, but an equally sharp and sudden recovery in 1993, although it remains to be seen whether this recovery can be sustained.

The Jamaican experience provides evidence on a number of questions regarding the link between SA policies and income distribution in Latin America and the Caribbean. First, Jamaica conforms somewhat to the observed trend in the region of increased inequality in the face of market-friendly economic reforms. Second, the lasting impact of these reforms on inequality was much greater during the initial (less drastic) round of policy reform in the early 1980's, although the compensation to employees as reported in the national accounts is still 8 percentage points lower than it was in 1980. However, income distribution rebounded immediately after the second round of (more severe) reforms in the early 1990's, indicating that the timing of reforms may be an important factor in determining the lasting impact of adjustment policies on distribution.

Finally, the hypothesis that general economic conditions (including economic growth and external market conditions) and not specific adjustment policies *per se* might explain the change in the distribution of income (Morley, 1994) may be applicable in the Jamaican case. Table 1 shows the growth rate of GDP during the period under consideration here. GDP growth was stagnant in

the first half of the 1980's, but then picked up at the end of the decade when inequality and living standards improved. However growth has stagnated in the last three years, and in 1993 when the biggest improvement in inequality was registered, GDP growth was a mere 0.7 percent.

Since the Jamaican economy is heavily dependent on the mining sector, the state of the world aluminum market has an important impact on the economy. Indeed GDP growth closely follows government revenue from the bauxite production levy which in turn depends on the world price of aluminum. Revenue from the bauxite levy declined steadily between 1981 and 1985 (except for 1984), increased each year between 1986 and 1989, and then went down each year after 1989 (Alleyne et.al., 1995). So while positive growth and favorable external conditions might help explain the improvement in inequality in the late 1980's (although the rapid expansion of employment in the garment firms of the Export Processing Zones must also have played a role), they do not explain the movement in inequality after 1990. The latter movement is more likely the consequence of domestic agricultural production and the increased exports of non-traditional labor intensive goods in both manufacturing (garments) and agriculture.

REFERENCES

- Ahiram, E. (1964) "Income distribution in Jamaica, 1958," Social and Economic Studies, Vol.13:333-369.
- Alleyne, D., Ian Boxill & Al Francis (1995) "Environment and trade: A case study of Jamaica," (Kingston, Jamaica: Institute for Social and Economic Research).
- Anderson, Pat & Michael Witter (1994) "Crisis, adjustment and social change: A case study of Jamaica," in Elsie Lefranc (ed) Consequences of Structural Adjustment: A Review of the Jamaican Experience, (Kingston, Jamaica: University of the West Indies Press).
- Banskota, K., S.R.Johnson & G.L.Stampley (1988) "Income distribution in Jamaica," Journal of the Statistical Institute of Jamaica, Vol.1:21-38.
- Berry, Albert (1995) "The social challenge of the new economic era in Latin America," Centre for International Studies FOCAL Discussion Paper No. 1995-8, University of Toronto.
- Berry, Albert & Jaime Tenjo (1995) "Guessing the income distribution effects of trade liberalisation and labour reform in Colombia," Centre for International Studies FOCAL Discussion Paper No. 1995-5, University of Toronto.
- Boyd, Derrick (1985) "The impact of adjustment policies on vulnerable groups: The case of Jamaica, 1973-1985," in Giovanni Cornea et.al. Adjustment with a Human Face Vol. 2 (New York: UNICEF).
- Foster J., J. Greer and E. Thorbecke (1984), "A class of decomposable poverty measures," Econometrica Vol.52(1).
- Glewwe, P. & G. Hall (1995), "Poverty, inequality and living standards during unorthodox adjustment: The case of Peru, 1985-1990," Economic Development & Cultural Change Vol.42(4).
- Grootaert, C. (1994) "Poverty and basic needs fulfilment in Africa during structural change: Evidence from Cote d'Ivoire," World Development Vol.22(10):1521-1534.
- Handa, Sudhanshu (1996) "The determinants of teenage schooling in Jamaica: Rich vs. poor, girls vs boys," Journal of Development Studies Vol.32(4).
- King, Damien (1994) "The labour market before and after structural adjustment," mimeo, Department of Economics, University of the West Indies-Mona.
- Lim, Gail (1991) Jamaica's Financial System: Its Historical Development, (Kingston, Ja: Bank of Jamaica).
- Morley, S. (1994) Poverty and Inequality in Latin America: Past Evidence, Future Prospects (Washington DC: Overseas Development Council).
- Planning Institute of Jamaica (various years), Economic and Social Survey of Jamaica (Kingston, Jamaica: PIOJ).
- Sampson, Cezley (1994) "Structural adjustment privatisation, trade and economic deregulation: The Jamaican experience," in S.Neelamegham (ed) Competing Globally: Challenges and Opportunities (New Delhi: Allied Publishers Ltd).
- Stephens, Evelyn & John Stephens (1986) Democratic Socialism in Jamaica, (Princeton, NJ: Princeton University Press.)
- United Nations (1993) Structural Adjustment and Privatisation: An Examination of their Relationship in four Caribbean Countries, (Port of Spain, Trinidad: ECLAC).

United Nations (various years), International Trade Statistics (New York: UN).

UNDP (1990) Human Development Report, (New York: UNDP).

World Bank (1994) "Jamaica Country Economic Memorandum," Washington DC, The World Bank.

Table 1
Selected Labour Force Indices: 1980-1994

Year	Real GDP Growth (%)	Labour Force (000s)	Labour Force (% of pop)	Unemployment Rate	Manufact. Empl. (%)	Agricultural Employ. (%)
1980		960	45.1	27.4	10.4	37.4
1981	2.52	986	45.7	26.0	10.7	37.2
1982	1.23	1010	46.1	27.6	11.2	35.6
1983	2.26	1008	45.2	26.4	12.2	33.6
1984	-0.89	1046	46.1	25.0	12.5	33.1
1985	-4.72	1042	45.3	25.0	12.6	35.8
1986	1.67	1059	45.7	23.6	13.6	33.7
1987	6.04	1070	45.7	21.0	15.5	32.2
1988	1.46	1077	45.8	18.9	15.6	29.5
1989	4.47	1063	45.1	18.0	15.3	28.4
1990	5.31	1056	44.3	15.4	15.2	26.8
1991	0.51	1073	44.4	15.4	10.9	26.8
1992	1.88	1075	44.0	15.7	11.3	27.3
1993	0.68	1083	43.8	16.3	10.8	24.0
1994		1096	43.9	15.4	10.3	23.6

Source: GDP - International Financial Statistics, International Monetary Fund, various years; Other - Economic and Social Survey Jamaica, various years, Planning Institute of Jamaica.

Table 2
Distribution of Imports: Jamaica: 1975-1991

Item	1975-79	1980-84	1985-89	1990	1991
1 Food & Beverages	16.9	15.5	16.1	12.9	12.4
1.1 Primary	6.1	5.8	7.5	5.8	5.5
1.2 Processed	10.8	9.7	8.6	7.1	6.9
2 Industrial Supplies	34.1	29.2	30.6	28.3	30.2
3 Fuel	25.4	31.9	19.7	19.7	19.0
4 Machinery	10.02	10.6	13.3	15.2	13.7
5 Transportation equipment	5.9	5.7	7.0	10.3	10.2
5.1 Motor Cars	1.0	1.8	1.8	2.2	4.0
6 Consumer Goods	7.2	6.0	11.7	11.9	13.1
6.1 Durables	1.7	1.2	2.2	2.1	2.4

Table 3
Tariff Rates on Top 7 Imports for Selected Years

Item	1980	1991	1993
Cereals	0-15	0-30	0-30
Clothing & Accessories	0-45	0-45	5-30
Textile Fabric	0-40	0-10	0-5
Paper	0-30	0-45	0-30
Road Vehicles	0-45	0-45	0-30
Metal Manufactures	0-40	0-45	0-30
Industrial Machinery	0-45	0-45	0-30

Source: United Nations International Trade Statistics

Table 4
Monetary Data: 1988-94

	Money Supply: M1 (J\$M.)	Money Supply: M2 (J\$M.)	Liquid Assets Ratio	Exchange Rate	Interest Rate: Comm. Bank Loans	Consumer Price Index: Jan 1988 = 100
1988	2,909	8,900	51.0	5.5	24.3	109.2
1989	2,739	9,466	36.2	6.5	28.3	128.0
1990	3,516	11,297	35.0	8.2	31.8	166.1
1991	6,867	17,467	31.2	20.9	33.9	299.3
1992	10,284	27,817	61.8	22.2	45.6	419.6
1993	14,399	38,919	50.2	32.7	49.1	546.0
1994	17,897	54,784	60.6	33.4	43.0	692.3

Table 5
Share of Adjusted Expenditure by Deciles: 1989-93

	Year					Percentage Change	
<u>Decile</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1989-91</u>	<u>1991-93</u>
1	2.4	2.6	2.6	2.5	2.8	0.2	0.2
2	3.7	4	3.9	4.1	4.4	0.2	0.5
3	4.9	5.1	5	5.1	5.6	0.1	0.6
4	6	6	6.1	6.1	6.6	0.1	0.5
5	7.1	7.1	7.3	7.1	7.6	0.2	0.3
6	8.4	8.5	8.6	8.3	8.8	0.2	0.2
7	10.1	10	10.2	9.9	10.2	0.1	0.0
8	12.4	12.1	12.4	11.9	12.2	0.0	-0.2
9	16.2	15.7	15.8	15.6	15.3	-0.4	-0.5
10	28.9	28.8	28.2	29.5	26.5	-0.7	-1.7
Top 5%	18.4	18.2	17.8	19	16.6	-0.6	-1.2
Top 1%	6.3	6	5.9	6.6	5.6	-0.4	-0.3
Gini	0.376	0.356	0.363	0.369	0.335		
Rural Gini	0.356	0.343	0.338	0.334	0.308		
Urban Gini	0.346	0.350	0.351	0.368	0.339		

Table 6
Mean Adjusted Expenditure (1989 J\$) by Decile: 1989-93

			Year			Percentage Change	
<u>Decile</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1989-91</u>	<u>1991-93</u>
1	2084	2223	2073	1827	2540	-0.53	22.53
2	3216	3470	3179	2913	4037	-1.15	26.99
3	4246	4357	4073	3659	5139	-4.07	26.17
4	5193	5191	4939	4349	6093	-4.89	23.37
5	6173	6099	5913	5070	6974	-4.21	17.94
6	7373	7278	6949	5969	8095	-5.75	16.49
7	8809	8585	8289	7098	9422	-5.9	3.67
8	10757	10355	10002	8529	11189	-7.02	11.87
9	14111	13441	12781	11178	14070	-9.43	10.09
10	25238	24691	22791	21192	24376	-9.7	6.95
Top 5%	32066	31281	28734	27325	30347	-10.39	6.61
Top 1%	53970	51030	47453	46718	50619	-12.08	6.67
All Sample	8718	8570	8101	7178	9195	-7.08	13.50

Table 7

Food share by Decile: 198-93	Year					Percentage Change	
	1989	1990	1991	1992	1993	1989-91	1991-93
Decile							
1	66.3	64.8	60.3	69	59.78	-9.05	-0.52
2	63.9	61.8	58.99	66.9	58.72	-7.68	-0.27
3	64.0	62.0	57.66	63.9	57.94	-9.91	0.28
4	62.6	59.7	59.15	61.9	58.27	-5.51	-0.88
5	61.4	60.4	58.79	61.4	58.85	-4.25	0.06
6	58.7	60.5	56.3	59.5	56.34	-4.09	0.04
7	56.5	57.0	56.55	59.4	55.51	0.09	-0.04
8	54.9	54.5	56.88	56.7	52.15	3.61	-4.73
9	52.5	52.2	55.5	53.5	50.65	5.71	-4.85
10	43.5	43.3	47.21	45.5	40.88	8.53	-6.33
All	58.4	57.6	56.73	59.8	54.91	-2.86	-1.82

Table 8

Poverty Measures: Jamaica 1989-1993

	1989	1990	1991	1992	1993
<u>30 Percent Poverty Line</u>					
P0	0.300	0.296	0.329	0.407	0.206
P1	0.099	0.089	0.105	0.132	0.062
P0 (rural)	0.409	0.418	0.446	0.509	0.275
P1 (rural)	0.142	0.132	0.151	0.172	0.089
<u>10 Percent Poverty Line</u>					
P0	0.100	0.093	0.108	0.131	0.054
P1	0.024	0.020	0.025	0.035	0.015
P0 (rural)	0.150	0.143	0.162	0.176	0.075
P1 (rural)	0.036	0.031	0.037	0.048	0.021

P0 is the headcount measure and P1 is the poverty gap measure.

Table 9
Schooling Outcomes by Age and Quintile (%)

	<u>Total Enrollment</u>			<u>High School Enrollment</u>		
	<u>1989</u>	<u>1991</u>	<u>1993</u>	<u>1989</u>	<u>1991</u>	<u>1993</u>
Full Sample						
6-11	99.0	98.5	99.5			
12-17	78.4	82.4	83.6	20.2	21.1	21.9
18-19	10.9	13.1	13.7			
Bottom Tercile						
6-11	97.5	97.9	98.4			
12-17	70.1	77.0	78.7	9.4	8.3	11.1
18-19	5.8	9.6	7.8			
Bottom Decile						
6-11	95.1	99.9	97.1			
12-17	68.3	72.9	79.0	7.9	8.3	8.4
18-19	6.3	3.2	13.8			
	<u>Full Attendance in Reference Week</u>			<u>Meal Provided at School</u>		
Full Sample						
6-11	70.8	76.2	78.5	60.6	65.6	72.4
12-17	72.0	80.4	79.4	47.0	45.7	65.6
Bottom Tercile						
6-11	65.3	71.1	72.1	67.7	67.4	76.7
12-17	64.4	78.0	72.7	60.1	50.8	66.8
Bottom Decile						
6-11	65.4	65.9	78.6	64.4	58.1	76.0
12-17	66.2	69.1	72.2	56.1	39.7	67.4

Table 10
Health Outcomes (%)

	<u>Sick in Last 4 Weeks</u>			<u>'Usual Activity' Days Lost</u> <u>to Illness</u>			<u>Sought Care if Sick</u>		
	1989	1991	1993	1989	1991	1993	1989	1991	1993
Full Sample	14.7	13.7	11.8	5.1	6.1	6.4	49.9	47.7	50.8
Bottom Tercile	13.6	13.3	12.7	6.5	7.5	7.9	45.3	45.1	44.8
Bottom Decile	13.2	11.2	10.6	7.5	11.8	8.6	41.8	37.2	43.4

Table 11
Health Outcomes for Preschool children (%)

	<u>% Low Birthweight</u>			<u>Diarrhoea in Reference Week</u>		
	1989	1991	1993	1989	1991	1993
All Children	7.0	13.3	7.3	6.5	9.1	4.6
Bottom Tercile	6.5	16.4	7.8	7.6	9.1	2.7
Bottom Decile	6.9	20.7	8.8	7.9	14.0	3.0
Immunization Record						
	<u>O.P.V.</u>			<u>D.P.T.</u>		
	1989	1991	1993	1989	1991	1993
All Children	77.8	82.2	80.2	81.5	82.9	81.1
Bottom Tercile	76.6	81.7	79.6	79.2	81.7	80.4
Bottom Decile	76.2	82.8	81.3	78.5	82.8	81.3
	<u>B.C.G.</u>			<u>Measles</u>		
	1989	1991	1993	1989	1991	1993
All Children	94.9	95.8	92.0	78.3	84.0	79.7
Bottom Tercile	94.2	92.4	90.7	77.3	80.9	78.2
Bottom Decile	92.1	87.7	91.0	78.7	78.6	78.2

Table 12
Housing Characteristics, 1989-1993

Characteristics	1989	1991	1993
Tenure			
<u>own home</u>	69.8	54.8	59.7
bottom tercile	85.3	72.3	68.0
bottom decile	90.5	79.4	68.5
Toilet Facility			
<u>flush toilet</u>	44.0	44.3	47.0
bottom tercile	11.7	15.3	26.1
bottom decile	4.8	10.8	21.6
<u>pit latrine</u>	53.7	53.9	50.3
bottom tercile	85.2	81.5	69.3
bottom decile	90.0	84.7	73.1
<u>exclusive use of toilet</u>	79.3	78.1	78.2
bottom tercile	87.3	88.0	77.5
bottom decile	92.2	95.5	77.6
Water Supply			
<u>indoor tap</u>	33.3	34.6	37.7
bottom tercile	8.1	13.5	15.2
bottom decile	4.8	10.8	11.4
<u>outdoor tap</u>	21.7	19.6	23.4
bottom tercile	13.2	15.3	28.3
bottom decile	4.8	8.6	19.2
<u>public standpipe</u>	21.8	15.7	20.9
bottom tercile	38.5	23.7	29.9
bottom decile	47.2	29.5	38.3
<u>other (river, lake, rain)</u>	23.2	30.1	18.0
bottom tercile	40.2	47.5	25.6
bottom decile	43.3	51.1	31.1
Source of Light			
<u>electricity</u>	60.7	65.5	67.2
bottom tercile	29.4	41.7	44.2
bottom decile	17.8	28.8	35.8

Figure 1
Trade as a Share of GDP (Constant 1987 US\$)
Jamaica: 1970-1993

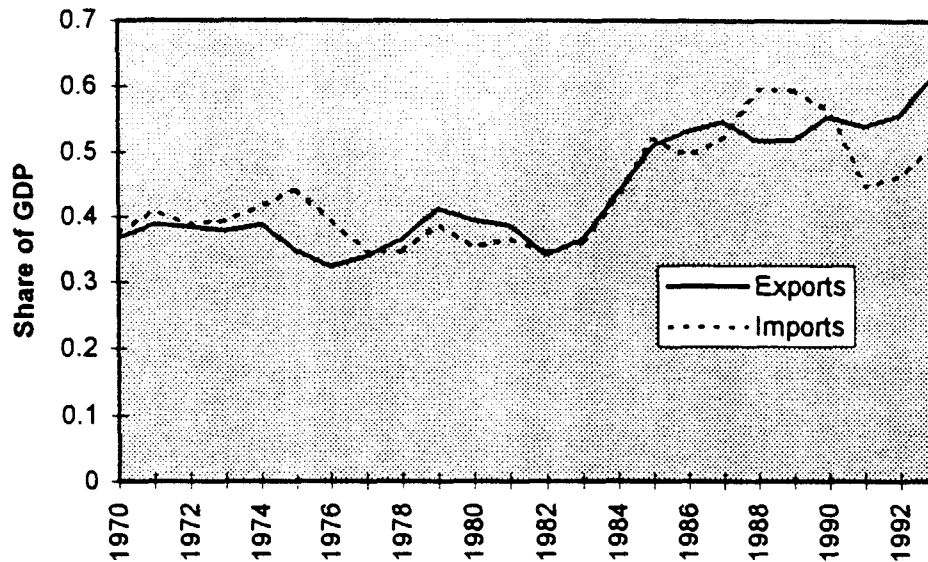


Figure 2
Share of Non-Traditional Exports in Total Exports
Jamaica 1980-1994

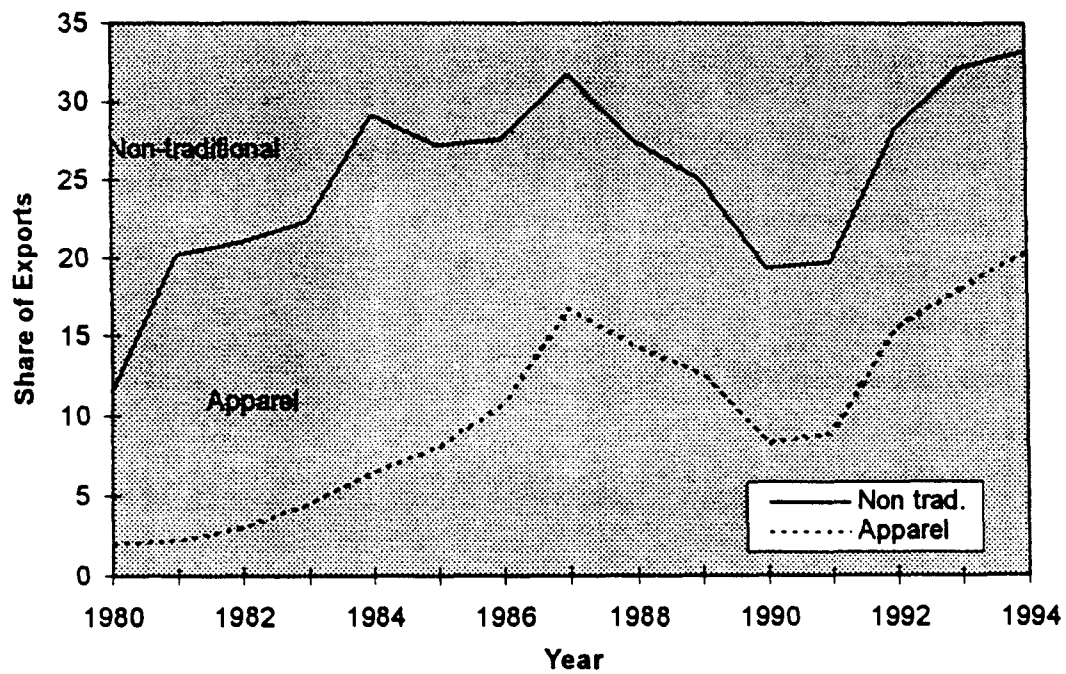


Figure 3

Privatizations

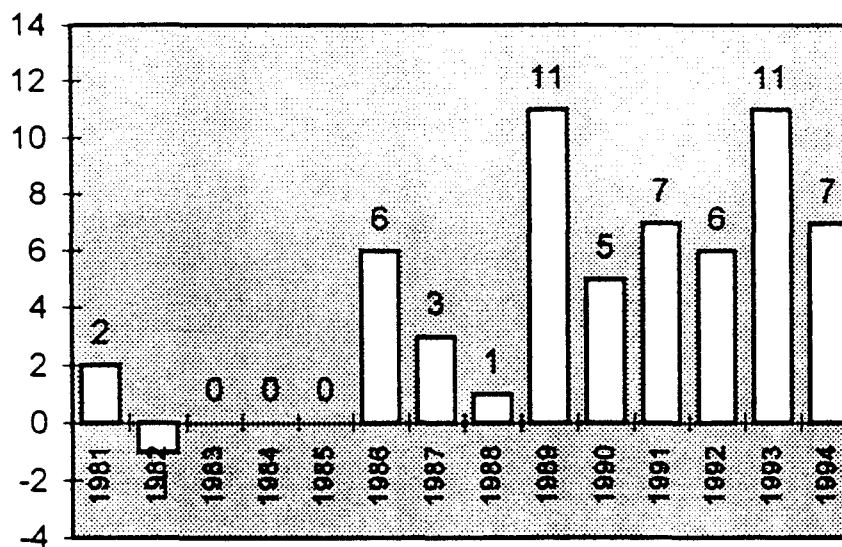


Figure 4

Real Wages in Jamaica: All Workers and Wage Earners

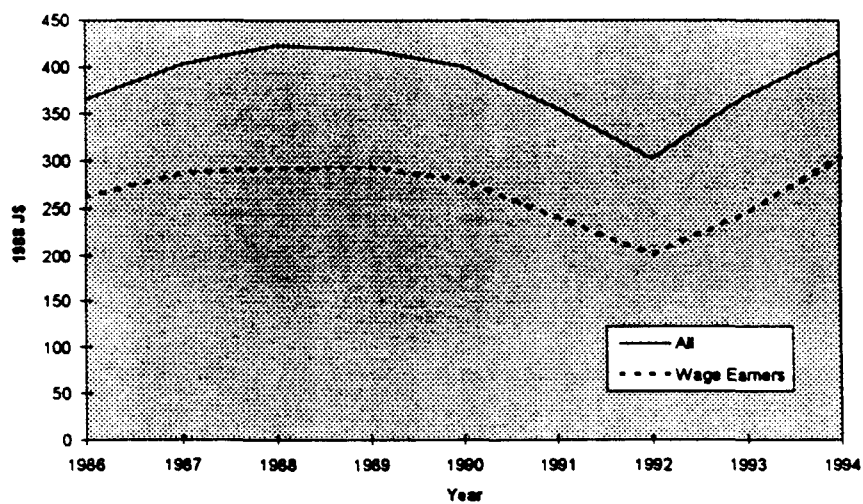


Figure 5

Agricultural Production Index: 1981-1994

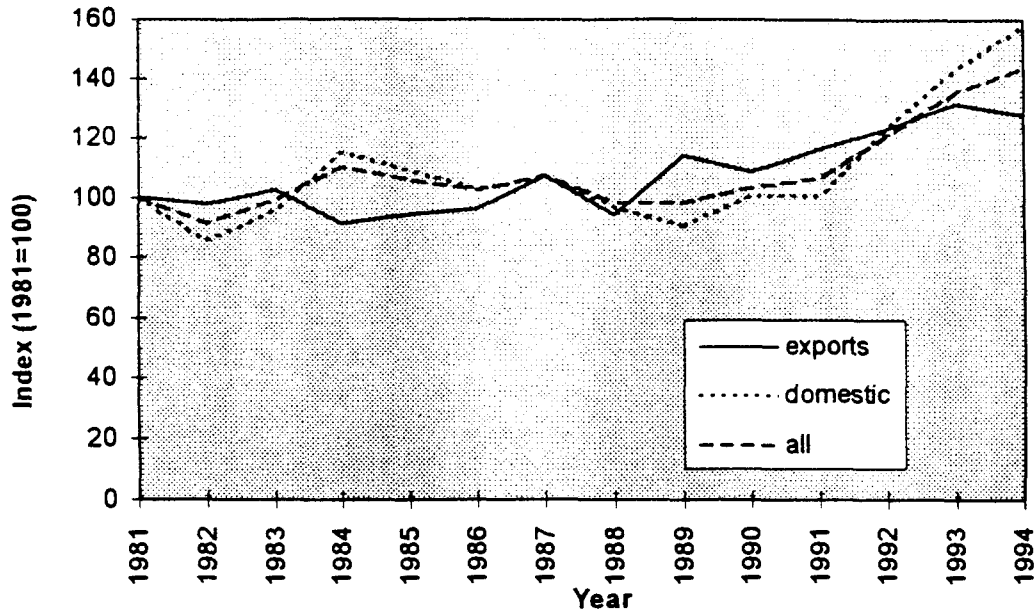


Figure 6

Regional Gini Coefficients: 1989-93

